UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/886,839	06/20/2001	Andrew Witkowski	50277-1546	6253

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EXAMINER
WOO, ISAAC M

ART UNIT	PAPER NUMBER
2162	

DATE MAILED: 12/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
	09/886,839	WITKOWSKI ET AL.
Office Action Summary	Examiner	Art Unit
	Isaac M Woo	2162

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>30 July 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-20 and 41-62</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-20 and 41-62</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
        application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date <u>7/30/04, 10/15/04</u>.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____ .

DETAILED ACTION

1.   This action is in response to Applicant's Amendments, filed on July 30, 2004

have been considered but are deemed moot in view of new ground of rejections below.

2.   Claims 1, 7 and 12 are amended. Claims 21-40 are canceled. Claims 1-20 and

41-62 are presented for examination.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-20 and 41-62 are rejected under 35 U.S.C. 102(e) as being anticipated

by Bakalash et al (U.S. Patent No. 6,434,544, hereinafter, "Bakalash") in view of Earle

(U.S. Patent No. 5,394,724).

With respect to claims 1, 7 and 12, Bakalash discloses, receiving, at a database

server (Data Warehouse, RDBMS, relational database management system, fig. 1A), a

database query (data query, fig. 1A), reference data in a relational structure as if the

data was data in a multidimensional array (fig. 1B, the data in data warehouse is

aggregated in Multidimensional database, by doing loading data from RDB to

Multidimensional database, fig. 2A), in response to receiving database query (data

query, fig. 1A), the database server executing the database query; retrieving data from

a relational structure (fig. 2A, loading data from RDB, relational database, to

Multidimensional database, fig. 2A); storing the data in a structure that can be

addressed as a multi-dimensional array (fig. 3A, loading data from relational database

into Multidimensional database, col. 9, lines 29-36); and performing the operation

specified in the database query on the data, see (col. 3, lines 40-50, data query

operation on multidimensional data and data query results are provided to user).

Bakalash does not explicitly disclose non-relational structure. However, Earle discloses,

"Existing multidimensional databases (non-relational and non-spreadsheet) which

incorporate the ability to directly calculate the offset to the desired data item do so by

one of two methods", see (col. 3, lines 66-67 to col. 4, lines 1-11). This teaches that the

multidimensional database, such as spreadsheet, is a non-relational data structure.

Therefore, it would have been obvious to a person having ordinary skill in the art at the

time of the invention was made to modify Bakalash by incorporating non-relational

structure with the system of Earle. Thus, one having ordinary skill in the art at the time

the invention was made would have found it motivated to use such a modification

because that would provide Earle's system the enhanced capability of providing efficient

data manipulating with multidimensional database (non-relational structure) for saving

and retrieving data in the data management system

With respect to claim 2, Bakalash discloses, storing the data in a structure that can be symbolically addressed as an n-dimensional array, see (fig. 2B, col. 9, lines 12-22).

With respect to claim 3, Bakalash discloses, presenting in tabular format results from performing the operation, see (fig. 8A, col. 15, lines 47-60).

With respect to claim 4, Bakalash discloses, automatically reordering the specified operations to allow the operation to be correctly performed on the data stored in the non-relational structure, see (col. 3, lines 40-50).

With respect to claim 5, Bakalash discloses, aggregating over a set of data information contained in multiple cells of said non-relational structure, see (fig. 2B, col. 9, lines 12-22).

With respect to claims 6 and 11, Bakalash discloses, performing a series of manipulations on the data until a particular criterion is satisfied, see (col. 3, lines 40-50).

With respect to claim 8, Bakalash discloses, receiving a database query that specifies a multi-dimensional array operation, see (col. 3, lines 40-50).

With respect to claim 9, Bakalash discloses, retrieving the data from one or more relational database tables, see (fig. 2A, loading data from RDB, relational database, to Multidimensional database, fig. 2A).

With respect to claim 10, Bakalash discloses, storing the data in a non-relational structure, see (col. 3, lines 40-50).

With respect to claim 11, Bakalash discloses, storing the data in a non-relational structure, see (col. 3, lines 40-50).

With respect to claim 13, Bakalash discloses, retrieving the first set of data from a relational database, see (fig. 3A, loading data from relational database into Multidimensional database, col. 9, lines 29-36).

With respect to claim 14, Bakalash discloses, retrieving the first set of data from one or more tables within the relational database, see (fig. 3A, loading data from relational database into Multidimensional database, col. 9, lines 29-36).

With respect to claim 15, Bakalash discloses, storing the first set of data within a spreadsheet application, see (fig. 6B, col. 10, lines 25-42).

With respect to claim 16, Bakalash discloses, storing the first set of data in a non-relational database application, see (fig. 6B, col. 10, ines 25-42).

With respect to claim 17, Bakalash discloses, storing the first set of data within an n-dimensional array data structure, see (fig. 6B, col. 10, lines 25-42).

With respect to claim 18, Bakalash discloses, symbolically addressing the first set of data as an n-dimensional array information, see (fig. 6B, col. 10, lines 25-42).

With respect to claim 19, Bakalash discloses, storing in a second relational structure, result information based on performance of the operation, see (col. 9, lines 29-36).

With respect to claim 20, Bakalash discloses, repeatedly performing a series of manipulations on the first set of data until a particular criteria is satisfied, see (fig. 2B, col. 9, lines 12-22).

Claims 41-60 and 62 are computer-readable medium claims, (claim 61 method claim under claim 1), which are identical previous claims 1-20, are rejected on grounds corresponding to the reasons given above in claims 1-20.

Conclusion

5.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.
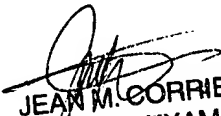
Contact Information

6.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac M Woo whose telephone number is (571) 272-4043. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

IMW
December 7, 2004

JEAN M. CORRIELUS
PRIMARY EXAMINER